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LLNL-WEB-400360

# **EM9001-RW Emergency Response Organization Training Refresher (FY 2016)**

**EM9001-RW, Rev. 12.0.1**

**EM9001-RW**  
Emergency Response Organization – FY 2016 Annual Refresher

**Auspices Statement**

This work performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344.

### Course Goal:

After completing this course, ERO members will demonstrate an understanding of three new program & plan/procedure changes (plus a heads-up on eight more pending changes!); and five lessons learned from drills, exercises, and/or actual emergency responses.

### Course Objectives:

- I Identify the new processes, procedures, or facility changes that may affect your roles and responsibilities as a member of the LLNL Emergency Response Organization (ERO).
- II Describe your roles and responsibilities as part of the LLNL ERO in relation to the lessons learned from the FY 2015 drills, exercises, and actual emergency responses.

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## Part I: Program Improvements

### New EOC Layout

In March 2015 the Emergency Operations Center (EOC) underwent major renovations without moving any walls. After months of planning, our team, led by Thad Kedzierski, had the overall layout and wiring changed to reflect the “U” shape seen in the model. This new layout has improved communications in the EOC, enabling the EOC staff to more easily view a wall of 13 monitors, as well as 2 whiteboards and dry-erase maps of LLNL S-200, S-300, SNL and the City of Livermore.



The wall monitors are able to display a wide range of information, including weather, plume models, local news stations, CCTV, maps, WebEOC®, Emergency Notification forms, live pictures from the incident scene, and other status boards. To further improve communications in the EOC, position and role changes have been planned for FY2016.

### Reduction of EPHAs

Since April 2014, the number of EPHAs for LLNL was reduced from 12 to 10, which has resulted in significant cost-savings for the site. Buildings 321C reduced its hazardous material inventory, and as a result an EPHA is no longer required for that facility. The most recent change occurred in March 2015 when the EPHAs for the Decontamination and Waste Treatment Facility

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(DWTF) and Area 625 were combined into a single EPHA, entitled *Emergency Planning Hazards Assessment Waste Storage Facilities*.

### **Call-out/Notification System Changed To AtHoc**

During FY2015, the ERO's previous ERO call-out/notifications system, *Communicator! NXT*, failed. A new ERO call-out system called AtHoc was implemented. The system operates using internet cloud-based software. Initial use of the system has been positive.

### **Future Programmatic Changes:**

Be on the lookout for more Emergency Programs improvements in FY 2016, including:

- A further reduction in Emergency Preparedness Hazards Assessments (EPHAs) from 10 to 7 due to consolidation of four Superblock EPHAs into one. This will translate to an additional reduction in the number of required evaluated exercises, which will in turn give EPO more time to focus on training and drills for the ERO, versus performance evaluations.
- A new drill program is currently being developed to increase the amount of hands-on training ERO members receive. Members of the ERO, particularly those who respond to the EOC will have an opportunity to attend a drill once per quarter.
- Consolidation of the ES&H & Facilities DOCs into the EOC (planned implementation April 1, 2016).
- Changes are being made to the ERO Training Program as EPO attempts to streamline the current courses offered which may include combining some courses and include additional hands-on training opportunities (in the form of quarterly drills). EPO's trainer Jaime Harrison will provide more information on these changes as the year progresses.
- A significant effort is underway to improve ERO checklists and procedures. New Emergency Plan Implementing Procedures (EPIPs) will be much shorter than the current ones, and will be focused on specific tasks. Checklists will also be shorter, referencing EPIPs in case the user does not understand how to implement a specific task. Emergency Program policy information that resides in current EPIPs is being moved to a new ERO Response Description Document, which will reduce redundancy between EPIPs. Instead of obtaining checklists from racks, each ERO position will have a folder that contains their checklist, all procedures they may need to reference, log keeping sheets, message forms, a phone directory, and any other job aids they may need. The new documents are being released as they are approved, with the goal of replacing all response-related EPIPs and checklists in 2016.
- New ERO boards are being developed for monitors in the EOC in an effort to help improve situational awareness, and at the same time serve as a job aid to help specific ERO members understand the type of information needed in the EOC.

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- Minor adjustments are planned to the ERO room layout, to include some seating changes. Adjustments are also being made to some job responsibilities. ERO members will be trained on the changes, which will take effect on April 1, 2016.
  - Three EPO employees retired last year (Patty Billy, Theresa McCollom and Nancy Bridge-Foster). We've brought on Amy Muro to replace Nancy, and are in the hiring process for the other two positions with the hopes that they will be part of our program by April 2016.
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## Part II: Drill and Exercise Lessons Learned

The Emergency Programs Organization conducted 11 emergency exercises during the previous fiscal year.

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### What Went Right!

The ERO did many things well during the FY 2015 site exercises, including:

- **Fire/Rescue.** The Fire Department demonstrated the ability to respond to emergencies effectively, wearing the proper gear, calling for additional assets in a timely manner, and mitigating hazardous situations in a timely manner.
- **Security.** The Security Department demonstrated the ability to activate facilities effectively, as well as provide technical & resource information to offsite law enforcement. Additionally, the Central Alarm Station (CAS) demonstrated the ability to prioritize calls and dispatch protective forces appropriately. Protective Forces communicated efficiently and responded to calls in a timely manner.
- **EOC.** An effective new process was implemented to improve room operations and communications. The EOC Coordinator begins the process by announcing room rules, and these announcements are followed by an orderly bridge conference call, which includes a clarification/hand-off of protective action responsibilities from the Incident Commander to the Laboratory Emergency Duty Officer (LEDO)/Emergency Director, after which the LEDO formally announces that the EOC is operational. Bridge conference calls are now being used regularly and effectively to facilitate effective communications between responders in the field and/or DOCs with the EOC.
- **Field Monitoring Teams.** The ES&H Field Monitoring Teams were deployed in the September 2015 Annual Full-Participation Exercise, demonstrating their ability to plan, deploy, and communicate field survey information to the ES&H DOC in a timely manner.

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## **What Needed Improvement**

A number of improvement items were noted during the FY 2015 site exercises. A few of these issues are highlighted below because they have been recurring problems:

- **Offsite Interactions**

*Issue:*

The City of Livermore said their interface with the LLNL EOC was inadequate during more than one exercise in FY2015. In the annual evaluated exercise in September 2015, during which a General Emergency was declared and significant levels of radioactive contamination blew across Greenville Road, the City noted that staff members were:

- ✓ Never told whether LLNL hazardous materials went offsite
- ✓ Not told how the event occurred (i.e., a propane explosion on a forklift)
- ✓ Not provided information about health risks and/or potential community impacts

*Lessons Learned / Improvements Underway:*

- ✓ ERO members were briefed that it is okay to provide the City with information that is not fully vetted (i.e., “raw”) as long as the City is informed that the information has not been completely verified and the status could change.
- ✓ LEDOs were briefed to make contact with the City early during events, and offer to send a Liaison to the City to improve communications.
- ✓ Meetings with the City PAO and LLNL PAO have been scheduled to improve communications.

- **EOC Operations**

*Issue:*

The EOC staff did not have adequate situational awareness in several exercises, which hampered the ability of the Management Team to make good decisions.

*Lessons Learned / Improvements Underway:*

- ✓ ERO position changes will be implemented on April 1, 2016 to integrate P&I staff who analyze information with Operations staff who are collecting information. In addition, changes will be implemented on April 1<sup>st</sup> to improve how information in the EOC is collected, displayed, and shared.

- **Consequence Assessment**

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#### *Issue:*

Multiple groups ran contamination/plume models during exercises, with each group using different assumptions. This resulted in different recommendations from various ERO groups, causing confusion in the EOC regarding protective action decisions.

#### *Lessons Learned / Improvements Underway:*

- ✓ The ERO was briefed that protective action decisions should be based on models provided by the Consequence Assessment Team in the EOC, and not from any other group (i.e., Environmental Functional Area).
- ✓ To improve communications regarding consequence assessment models, the ES&H Department Operations Center is being integrated into the EOC. ES&H and Consequence Assessment will work together closely to make recommendations to the Emergency Director in the EOC regarding protective actions.

#### • **Protective Actions**

##### *Issue:*

Worst-case initial protective actions were not issued onsite by the IC in more than one exercise, and improper offsite PARs were issued by the EMDO.

##### *Lessons Learned / Improvements Underway:*

- ✓ Improvements are being made to clarify information on Protective Action Sheets used by the IC, as well as EALs used by the EMDO.

#### • **Notifications**

##### *Issue:*

Mistakes were made on both initial and follow-up Emergency Notification forms, including listing the wrong EAL number as well as incorrect protective actions and/or protective action recommendations.

##### *Lesson Learned / Improvements Underway:*

- ✓ Emergency Management Coordinators have been briefed that their first primary task is to review the EAL chosen by the EMDO (as shown on the EN Form) with the Emergency Director, and determine if it is accurate and whether there is potential for the event to escalate. For events that may trip multiple EALs (e.g., earthquake), a new job aid has been created and will become effective on April 1, 2016 that will help the EMC track every EAL triggered by an event, both to help the Notifications Officer with EN Form revisions, and to ensure that each EAL condition is mitigated so that recovery operations can begin.
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**Please attend training that showcases the improvements, and offer feedback!**

**Thank you again for your continued participation on the LLNL Emergency Response Organization!**